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ENVIRONMENTAL ASSESSMENT  
BLM/EK/PL-97/015

REN EXPLORATION PROJECT

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**FINDING OF NO SIGNIFICANT IMPACT  
AND  
DECISION RECORD  
URANERZ: REN EXPLORATION PROJECT  
ENVIRONMENTAL ASSESSMENT  
BLM/EK/PL-97/015  
3809, N16-97-003P**

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**Finding of No Significant Impact**

Based on the analysis of potential environmental impacts contained in Environmental Assessment BLM/EK/PL-97/015, I have determined that the action will not have a significant effect on the human environment, and therefore, an environmental impact statement will not be prepared.

**Decision**

It is my decision to authorize the Uranerz: Ren Exploration Project as described in the proposed action of BLM/EK/PL-97/015. This decision is contingent on meeting all monitoring requirements and stipulations listed below.

**Monitoring**

A BLM representative will make regular field inspections of the REN Exploration Project area. These inspections will be performed throughout construction, operation, and reclamation of the proposed action. All field compliance inspections will be documented in the project file at the BLM office in Elko, Nevada.

If the drilling schedule necessitates drilling in Section 36, T37N, R49E during the spring, a survey of the sage grouse strutting ground will be conducted prior to any drilling or access route construction.

Uranerz will be required to submit an Exploration Program Summary Report by April 15 of each year to the BLM. This Exploration Program Summary Report will describe, including a map illustrating disturbance, all exploration activities that occurred for the year, including all disturbance constructed and reclaimed. The scope of the planned activities for the upcoming year will be outlined as part of the Summary Report. If the proposed activities go beyond the limits defined in the plan of operations, then an amendment will be filed.





## Stipulations

Prior to commencing or continuing exploration activities during the fall and spring periods, RENV will consult with the BLM Authorized Officer concerning possible cessation of drilling activities from November 16 to March 15. This action will minimize stress to migrating mule deer. In addition, a seasonal restriction within a 0.3 mile radius of the sage grouse strutting ground in Section 36 of T37N, R49E from March 1 to May 15 will be required, provided the strutting ground is active.

Uranerz will avoid all known cultural properties by demarcating avoidance zones which will include the recorded cultural properties. The avoidance zones will encompass an area around the cultural site(s) consisting of a minimum buffer of 60 meters (200 feet). The avoidance zones will be indicated on the ground by use of existing surface features (e.g., roads or fences) when such features are reasonably unique and obvious so as not to be misidentified. Where no such features exist, steel t-posts will be installed along the boundary at approximately 100 meters (328 feet) apart. shorter or longer distances will be dependant on topography and field of view.

All personnel employed by Uranerz or its contractors will be notified of the existence and whereabouts of all avoidance zones. All personnel will be directed not to enter any avoidance zone under penalty of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).

Should the results from exploration drilling outside of the avoidance zones necessitate that areas within the avoidance zone be subject to drilling or access road construction, the following measures will be undertaken prior to initiating any surface disturbing activities:

1. A description of proposed activities and a location map will be submitted to BLM.
2. A qualified archaeologist will be enlisted to relocate the cultural site(s) that could be impacted by the exploration activity.
3. An exclusion zone would be established around the cultural site(s) by staking and/or signing with steel posts to ensure that a visible barrier is present between the cultural site and the surrounding operations area in order to protect the cultural site(s) from damage.
4. Exclusion barriers will be placed a minimum of 60 meters (200 feet) from the perimeter of the cultural site(s). Where existing roads traverse the site and/or are adjacent to the perimeter of the cultural site(s), exclusion barriers will be placed along the roadside.
5. Maintenance to existing roads within an exclusion zone will be restricted to limits of the existing road berm.







In the event an eligible or unevaluated cultural site is subsequently found to have been damaged by activities associated with the proposed action, Uranerz will draft a data recovery plan for the affected site(s) within three months. After the data recovery plan has been accepted by the BLM and the State Historic Preservation Office (SHPO), Uranerz will implement data recovery at the affected cultural site(s) within one year of the date of acceptance of the data recovery plan by the BLM and the SHPO.

Prior to initiating or engaging in the proposed exploration activities, Uranerz must post the required surety as determined in the BLM and Nevada Division of Protection (NDEP) approved Reclamation Cost Estimate.

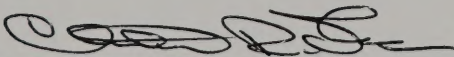
### Rationale


As a result of the analysis in the Uranerz: Ren Exploration Project Environmental Assessment, BLM/EK/PL-97/015, it was determined that the proposed action will not result in unnecessary or undue degradation to the public lands. The proposed action is in conformance with the Elko Resource Management Plan, Issue-Minerals, Management Prescription-1.

The implementation of the proposed action will allow Uranerz USA Inc. to conduct exploration and development drilling within the boundary of the Ren Exploration Project from the years 1997 to 2000. The 43 CFR 3809 Regulations require the claimant to file a plan of operations when the claimant proposes to create more than five acres of surface disturbance on their claims at any given time before conducting reclamation activities.

The No Action Alternative was not selected because it would not allow Uranerz to create more than five acres of surface disturbance, prior to conducting reclamation activities, at any given time while conducting their drilling program for this project. The General Mining Law of 1872 gives the claimant the right to explore, discover and diligently develop the mineral deposit(s) on their claims. The Bureau of Land Management's responsibility is to determine and assure that unnecessary or undue degradation does not occur to the public lands during the exploration for and/or development of locatable mineral deposit(s).

The decision is subject to appeal pursuant to 43 CFR 3809.4. A party that is adversely affected may file such an appeal in accordance with the procedures in 43 CFR, Part 4. An appeal shall be filed no later than 30 days after the date the Decision Record is available to the public.



 Helen Hankins  
District Manager

11/6/97

Date









# United States Department of the Interior Bureau of Land Management Elko Field Office



## ENVIRONMENTAL ASSESSMENT BLM/EK/PL-97/015

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**REN Exploration Project Environmental Assessment**  
**BLM/EK/PL-97/015**  
**N16-97-003P**

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## **1.1 INTRODUCTION**

The REN Venture (RENV), a joint venture between Barrick Gold Corporation (Barrick) and Renmin (REN) Inc. ("Renmin"), with Barrick acting as the sole managing member, is subject to an initial exploration agreement with the Government of the Republic of China (ROC), dated 1997. The REN Exploration Project is located in the area of the REN Operations/Reclamation Plan dated January 1997 and covers an area of approximately 1,540 acres. The project area is located in western Elba County, approximately 10 miles west of the town of Elba. The 1,540 acre project area is made up of 100 mineral leasehold interests, which are owned by RENV (Figure 1-2). The REN Exploration Project is subject to a preliminary environmental assessment and would not proceed until 1998.

The REN Mine has been the site of several studies, including an impact study by Barrick Gold Inc. (Barrick) and a study by the U.S. Environmental Protection Agency (EPA) in 1997. The study by Barrick was a preliminary study on the project area. The study by the EPA was a more detailed study of the site. A report on the study by the EPA was submitted to the U.S. Environmental Protection Agency in 1997. The study by the EPA was a preliminary study on the project area.

Barrick and Renmin have been the subject of several studies, including an impact study by Barrick Gold Inc. (Barrick) and a study by the U.S. Environmental Protection Agency (EPA) in 1997. The study by Barrick was a preliminary study on the project area. The study by the EPA was a more detailed study of the site. A report on the study by the EPA was submitted to the U.S. Environmental Protection Agency in 1997. The study by the EPA was a preliminary study on the project area.

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**BLM/EK/PL-97/015**  
**N16-97-003P**

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**1.0 INTRODUCTION/PURPOSE AND NEED**

---

**1.1 INTRODUCTION**

The REN Venture (RENV), a joint venture formed between Uranerz U.S.A., Inc. ("Uranerz") and Romarco (REN) Inc. ("Romarco"), with Uranerz acting as operator for the venture, proposes to conduct mineral exploration activities on lands administered by the Bureau of Land Management (BLM), Elko Field Office. The REN Exploration Project is described in the proposed Plan of Operations/Reclamation Plan dated February 1997 (and revised June 1997). The project area is located in western Elko County approximately 29 miles northwest of Carlin, Nevada (**Figure 1-1**). The 1,840 acre project area is made up of 98 unpatented lode claims on public lands controlled by RENV (**Figure 1-2**). The REN Exploration Project is scheduled to extend over a three year period and would run through 1999.

The REN Mine has been the site of previous precious metals exploration and mining. Rayrock Mines, Inc. (Dee Gold Mining Company) previously operated a small open pit mine and heap leach processing facility on the property from 1989 through 1991. The heap leach pad was detoxified and the site was reclaimed. A revegetation bond, secured by Homestake Mining Company, is being held on the mining activities until the revegetation meets the Nevada Interim Standards.

Rayrock and Corona Gold, Inc. formed the REN Joint Venture in 1991 after closure of the REN Mine as operated by Dee Gold. The REN Joint Venture subsequently entered into the REN/Bell Venture with the Bell Venture (Newmont Gold Company and Barrick Gold Mines) in 1992. The REN/Bell Venture terminated in 1993 and the REN Property reverted to the REN Venture (Rayrock and Corona) and was further assigned to Corona Gold, Inc. in 1995. The REN Property is now subject to the RENV (Uranerz and Romarco) - Corona Gold, Inc. Exploration Agreement with Option for Joint Venture of November 15, 1995, as referenced above.

*FIGURE 1-1. Regional Location of the REN Exploration Project*

# NEW RENEWABLE ENERGY PROJECT ENVIRONMENTAL ASSESSMENT

## EXECUTIVE SUMMARY

W-10-001

### 1.0 INTRODUCTION, PURPOSE AND SCOPE

#### 1.1 Introduction

The NEW Renewable Energy (NRE) is a joint venture formed between U.S.A. Inc. ("U.S.A.") and Renewable Energy ("RE") with U.S.A. acting as sponsor for the venture, purpose to conduct mineral exploration activities on land situated by the Bureau of Land Management (BLM), Elko Field Office. The NRE Environmental Project is described in the proposed Plan of Operations/Environmental Impact Statement (EIS) dated January 1997 (and revised June 1997). The project area is located in western Elko County approximately 25 miles northwest of Cedar Grove (Figure 1-1). The 1,500 acre project area is made up of 98 separate land claims or public lands controlled by BLM (Figure 1-2). The NRE Exploration Project is scheduled to extend over a three year period and would run through 1999.

The NRE plan has been the subject of previous previous mineral exploration and mining. Elko Field Office (EFO) Gold Mining Company previously operated a small open pit mine and then conducted processing facility on the property from 1975 through 1977. The open pit had been abandoned and the site reclaimed. A separate bond secured by Elko Field Office Company is being held on the mining activity until the reclamation meets the Nevada Reclamation Standards.

Elko Field Office and Elko Gold, Inc. owned the NRE Joint Venture in 1991 after closure of the NRE mine as operated by Elko Gold. The NRE Joint Venture subsequently entered into the NRE Joint Venture with the Elko Joint Venture (Elko Joint Venture and Elko Gold) in 1992. The NRE Joint Venture entered into a 1993 and the NRE Joint Venture entered into the NRE Joint Venture (Elko Joint Venture) and was further assigned to Elko Gold, Inc. in 1995. The NRE Joint Venture is now subject to the NRE Joint Venture and Elko Joint Venture. Elko Joint Venture Agreement with Elko Joint Venture of November 15, 1995 is attached hereto.



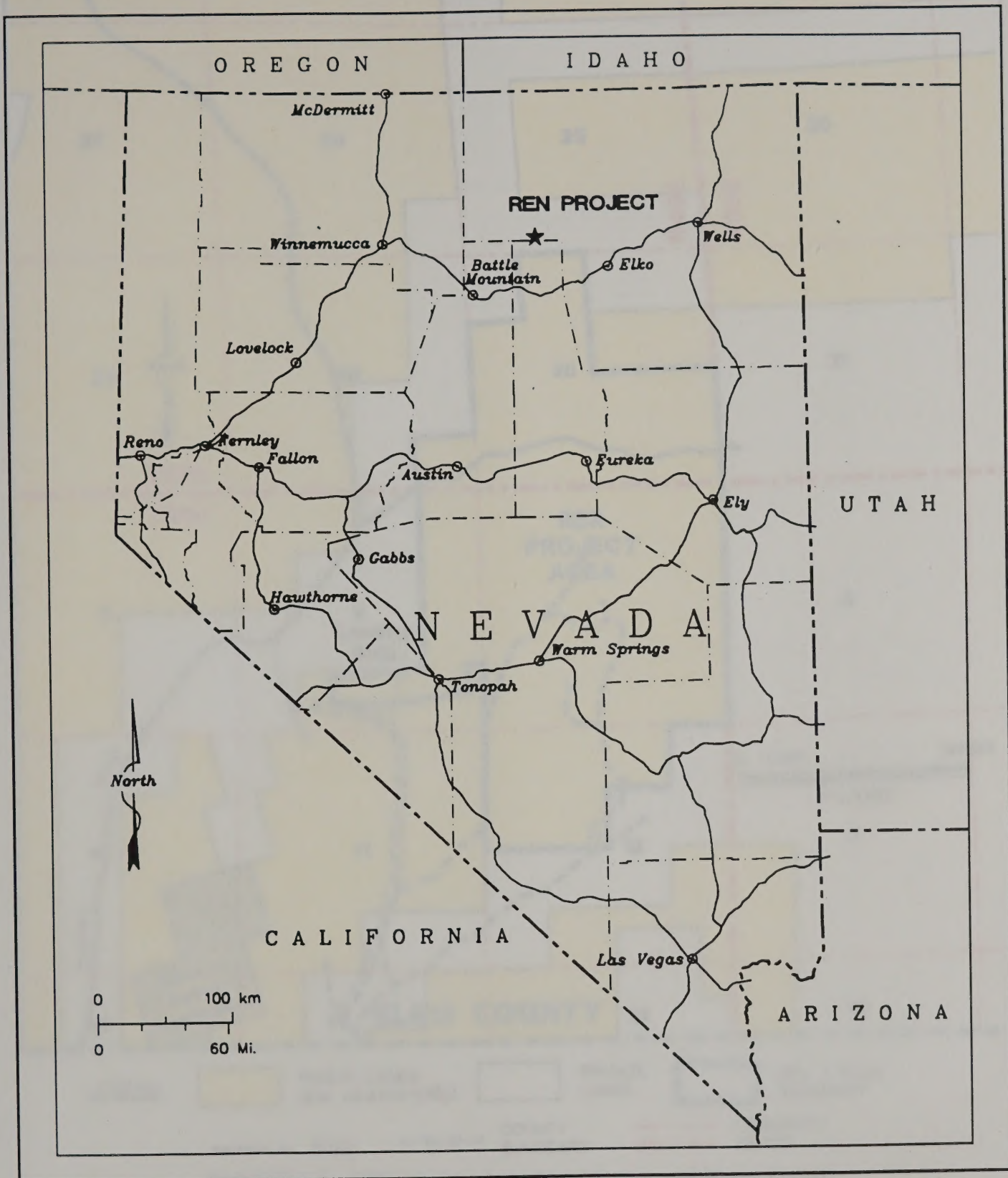
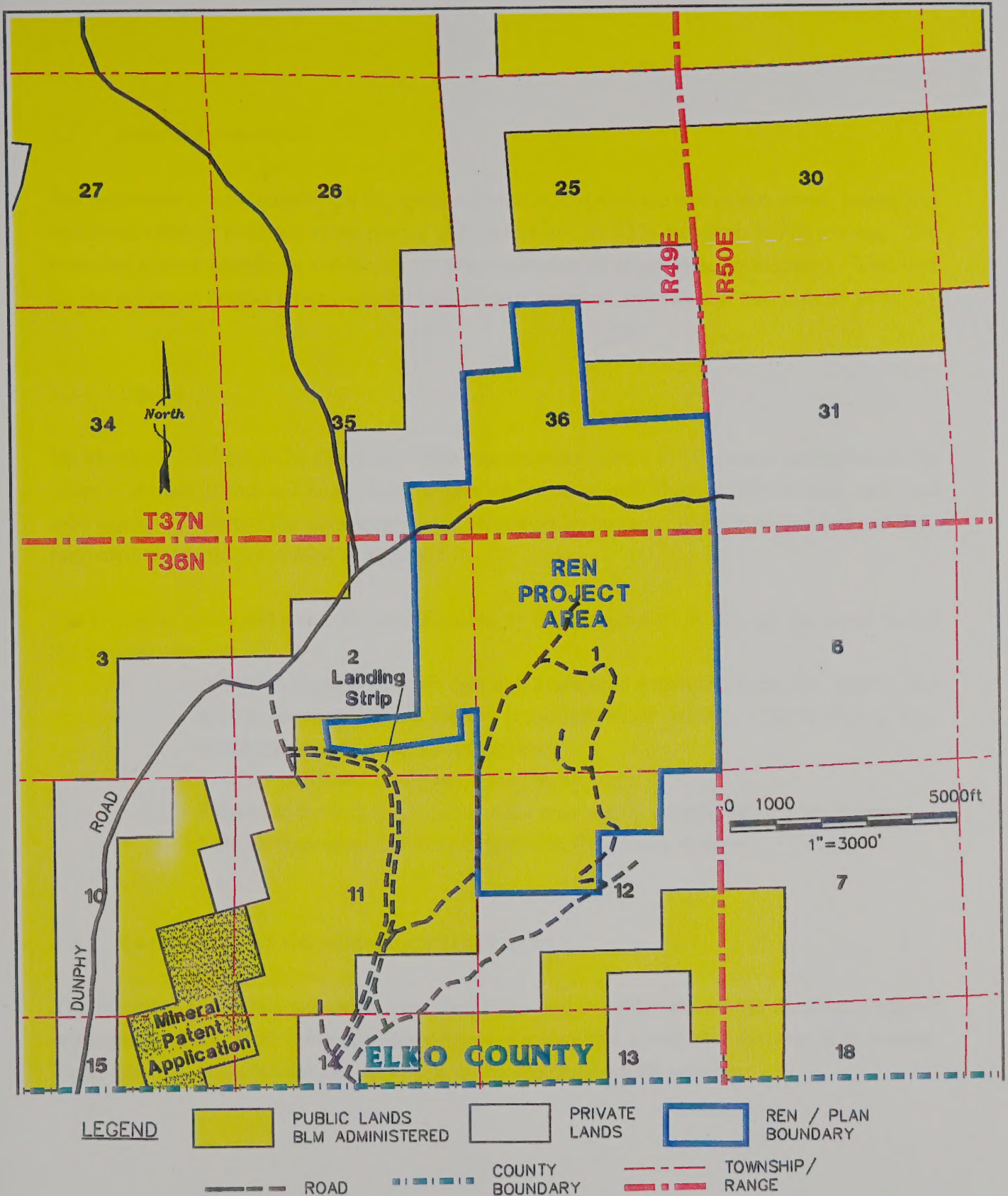


FIGURE 1-1. Regional Location of the REN Exploration Project.

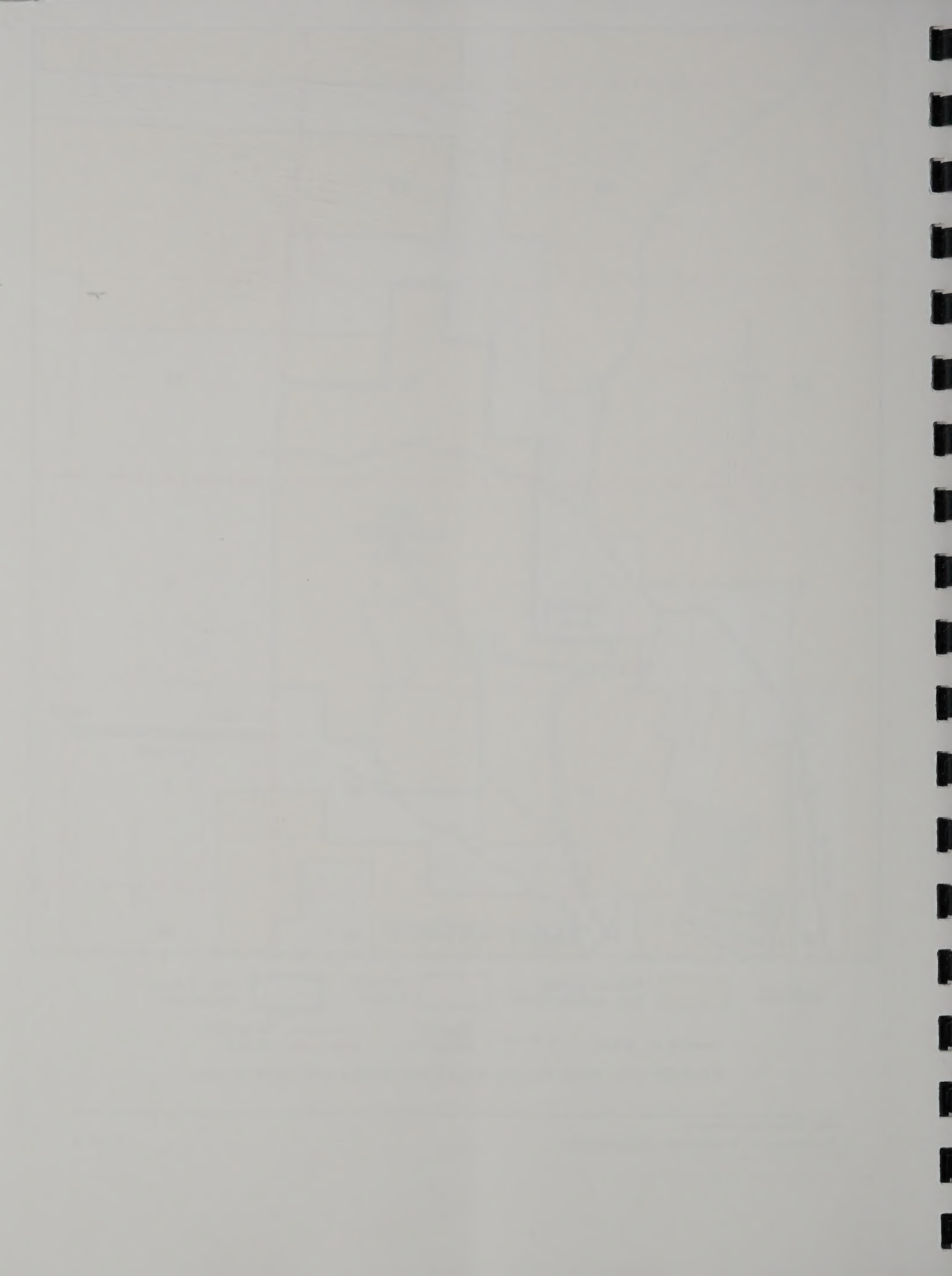


FIGURE 1-1. Regional Location of the REX Expansion Project





**FIGURE 1-2. REN Project Area Land Status and Main Access.**





## **1.2 PURPOSE AND NEED**

The purpose for the proposed REN Exploration Project is to define the nature and extent, shape, and economic value of precious metal-bearing deposits within the REN Exploration Project area. The proposed drilling operations are needed for the preparation of future mine development. The need for the proposed project arises from the international, national, and regional demands for gold.

## **1.3 ISSUES**

On March 28, 1997 the BLM Elko Field Office issued a news release to 19 news organizations in the states of Nevada, Idaho, and Utah. Letters were mailed to 77 individuals, and/or federal, state, and local agencies as part of the scoping and issue identification process. A list of responders and their respective concerns is provided in Section 5.3.

The following issues and concerns were identified by BLM specialists or through the public during the scoping process:

- Wildlife - impacts to mule deer and pronghorn antelope transitional ranges, sage grouse strutting ground, raptors (especially those nesting in the REN pit), bats, reclamation, and special status species;
- Traffic - additional traffic and access to SR-766;
- REN heap leach facility - concern for maintaining integrity of heap leach liners;
- Cultural Resources and Native American Religious Concerns.

## **1.4 LAND USE PLAN CONFORMANCE STATEMENT**

The proposed action and alternative described below are in conformance with the Elko Resource Management Plan, Issue: Minerals Management, Prescription 1, and are consistent with Federal, State, and local laws, regulations, and plans to the maximum extent possible.





---

## 2.0 PROPOSED ACTION AND ALTERNATIVE

---

### 2.1 INTRODUCTION

RENV submitted the Plan of Operations/Reclamation Plan for the REN Exploration Project to the BLM Elko Field Office in February, 1997 (revised June 1997). The proposed exploration project would occur entirely on public lands administered by the BLM. The REN Exploration Project area is shown in **Figure 2-1**. The applicant address is:

Uranerz U.S.A., Inc.  
5450 Riggins Court, Suite 6  
Reno, Nevada 89502

### 2.2 PROPOSED ACTION

The RENV operated an exploration program on the property in 1996 under Notice N16-96-027N. The RENV is proposing to continue precious metal exploration operations in the REN Mine Project area and would increase their disturbance beyond the 5-acre Notice level limitation. This continued exploration would include drilling approximately 50 additional reverse circulation (RC) drill holes and up to 15 diamond drill (DD) core holes over a three year period. Exploration trenches may also be installed to map and sample shallow bedrock. Surface mapping, sampling, and geophysical surveys would also be performed.

The proposed project area encompasses 1,840 acres of public lands administered by the BLM which are open to location of locatable minerals under the 1872 Mining Law. Disturbance within the project area would total approximately 30 acres, including approximately 4.5 acres which have already been disturbed under an existing notice (N16-96-027N).

RENV proposes to conduct exploration activities that include the construction of:

- 65 drill holes;
- Associated drill pads and sumps;
- Exploration drill roads;
- Trenches.

## 2. PROPOSED ACTION AND ALTERNATIVE

### 2.1. BACKGROUND

RENV submitted the Plan of Operations/Declaration Plan for the RENV Exploration Project to the BLM Elko Field Office in February, 1997 (revised June 1997). The proposed exploration project would occur entirely on public lands administered by the BLM. The RENV Exploration Project area is shown in Figure 2-1. The applicant address is:

University of A, Inc.  
3450 Big Horn Court, Suite 2  
Reno, Nevada 89502

### 2.2. PROPOSED ACTION

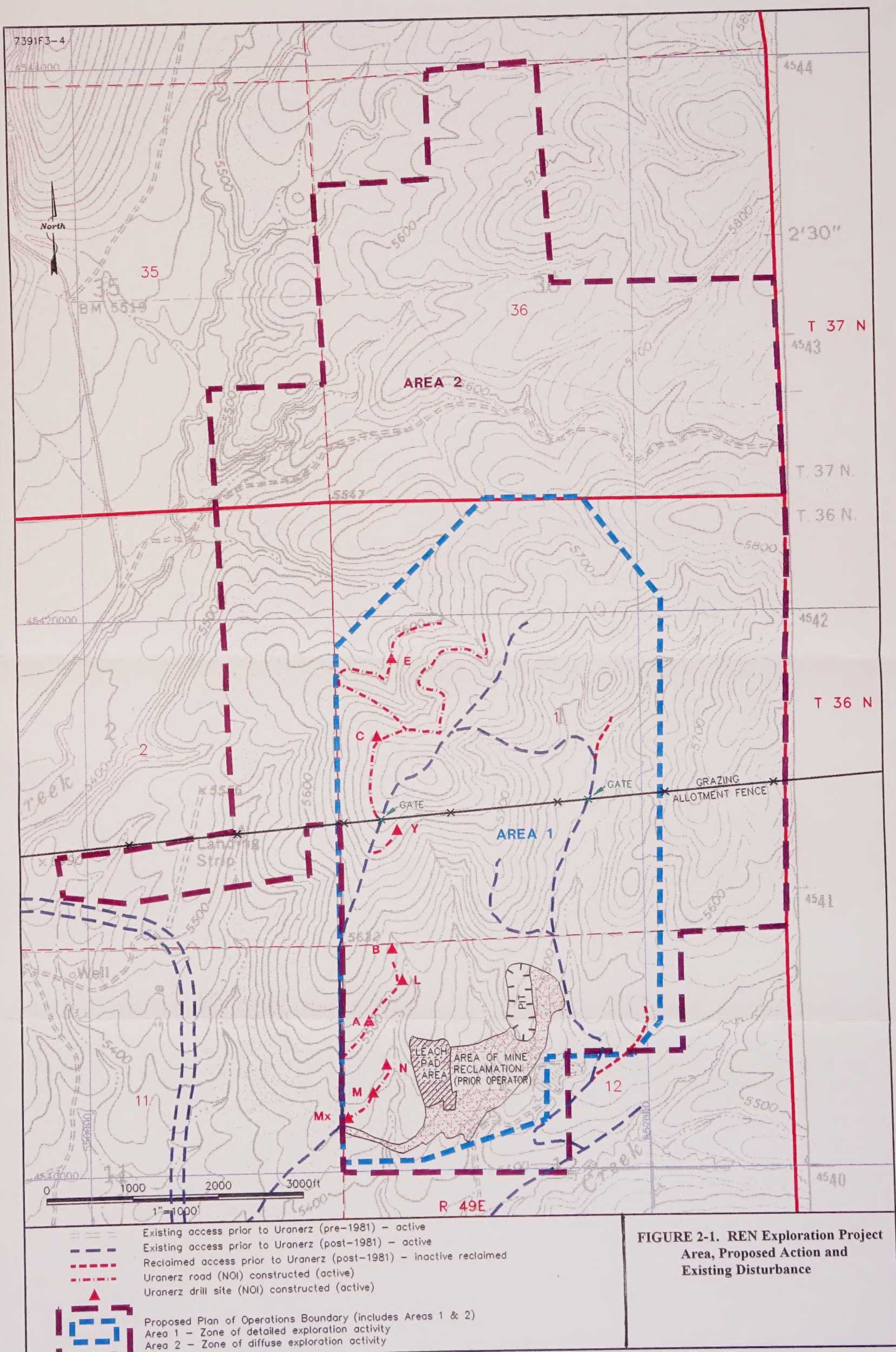
The RENV operates an exploration program on the property in 1998 under Nevada NIS-98-027M. The RENV is proposing to conduct various small exploration operations in the RENV Mine Project area and would require that disturbance beyond the 5-acre BLM 4-level limitation. This potential exploration would include drilling approximately 50 additional reverse circulation (RC) drill holes and up to 15 diamond drill (DD) core holes over a three-year period. Exploration activities may also be needed to map and sample shallow bedrock. Surface mapping, sampling, and geological surveys would also be performed.

The proposed project area encompasses 1,840 acres of public lands administered by the BLM which are open to location of locatable minerals under the 1872 Mining Law. Transactions within the project area would total approximately 10 acres, including approximately 5 acres which have already been disturbed under an existing notice (N16-00-027M).

RENV proposes to conduct exploration activities that include the construction of:

- 62 drill holes,
- Assured drill pits and sample
- Exploration drill roads,
- Tracer.





**FIGURE 2-1. REN Exploration Project Area, Proposed Action and Existing Disturbance**







The drill pads would typically be constructed with dimensions of 50 feet by 100 feet, including mud sumps, and would be relatively level. Construction of 50 drill sites would consist of approximately 5.7 acres of disturbance (more than one drill hole may be drilled from each drill pad). Approximately 27,000 feet of new drill roads may be constructed. These roads, built to an average disturbance width of 20 feet (running surface width of 12 feet), would result in 12.4 acres of new surface disturbance. Up to 16,000 feet of exploration trenches may be excavated. Trenches would account for a total disturbance of 7.3 acres.

### **2.2.1 Drilling Methods**

Deep drill holes are essential to test targets on the RENV property. Therefore, a combination of drilling techniques may be required, including reverse circulation, mud rotary, and diamond core. Drilling depths may be as great as 4,000 feet. Operation of these rigs would require two- to three-man drill crews, a geologist and a sampler/logger. Drill hole diameters would vary between 10 inches near the surface, stepping down to 6 inches for the reverse circulation and mud rotary portions of the holes, to 2.5 inches for diamond core. Deeper portions of the deepest holes would be cored, and none of the holes would be 10-inch diameter over their entire lengths. The drill pads would be constructed adjacent to roadways where possible to minimize disturbance. Drilling operations would proceed 24 hours per day in two 12-hour shifts, approximately 23 days per month in a drill season of approximately 6 months per year. The specific location of each drill site would be determined in the field based on geologic information collected during the exploration program.

The various types of drilling methods are described in detail below:

#### ***Reverse Circulation***

Reverse circulation drilling ranges from 1,000 to 3,500 feet. At shallow depths, dry air would be the working fluid and water would be injected only to suppress dust. Reverse circulation units usually consist of three large tandem axle carriers (rig, water truck, pipe truck) and a pickup truck to transport crews and supplies. Some drilling units provide a combination water truck/pipe truck so that only two large trucks are on site. All reverse circulation units would be truck-mounted.

#### ***Mud Rotary***

Mud rotary drilling would be used primarily in deep alluvial covered basins where the groundwater and unconsolidated formation makes drilling with air difficult. Mud rotary holes would not exceed 3,500 feet in depth. This type of drilling would utilize either water, bentonite, or polymers as drilling fluids. The quality of sample recovered would be less reliable than with reverse circulation drilling; however, the use of mud as a working fluid maintains better hole conditions, which would be of

The drill rods would typically be constructed with dimensions of 2 1/2 inch by 100 feet, including mud weight, and would be relatively heavy. Construction of 50 drill sites would consist of approximately 2.7 acres of disturbance from the one drill hole may be drilled along each drill pad. Approximately 17,000 feet of new drill rods may be constructed. These rods, built to an average distance with of 10 feet (assuming surface width of 12 feet), would result in 12.4 acres of new surface disturbance. Up to 10,000 feet of exploration trenches may be excavated. Trenches would account for a total disturbance of 7.7 acres.

### 1.2.1 Drilling Methods

Drill rods are essential to test targets on the RENV property. Therefore, a combination of drilling methods may be required, including reverse circulation, mud rotary, and diamond core drilling. Drilling depths may be as great as 4,000 feet. Operation of these rigs would require two- to three-man drill crews, a geologist and a samplelogger. Drill hole diameters would vary between 10 inches and 16 inches, depending down to 6 inches for the reverse circulation and mud rotary portions of the holes. Drilling depths for diamond core. Deeper portions of the deepest holes would be cased and none of the holes would be 10-inch diameter over their entire lengths. The drill rods would be constructed of sections to minimize disturbance. Drilling operations would be conducted 24 hours per day in two 12-hour shifts, approximately 23 days per month in a drill season of approximately 6 months per year. The specific location of each drill site would be determined by the first phase of geologic information collected during the exploration program.

The various types of drilling methods are described in detail below.

### Reverse Circulation

Reverse circulation drilling ranges from 1,000 to 3,500 feet. At shallow depths this method would be used for testing fluid and water would be injected only to suppress dust. Reverse circulation units usually consist of three large tandem axle trailers (rig, water truck, pipe truck) and a pickup truck to transport tools and supplies. Some drilling units provide a combination water truck/pickup truck so that only two large trucks are on site. All reverse circulation units would be truck-mounted.

### Mud Rotary

Mud rotary drilling would be used primarily in deep alluvial covered basins where the geology is not understood. This method makes drilling with air difficult. Mud rotary holes would not exceed 1,000 feet in depth. This type of drilling would utilize either water, bentonite, or polymers as drilling fluid. The quality of sample recovered would be less reliable than with reverse circulation drilling. However, the use of mud as a working fluid maintains better hole conditions, which would be of



particular importance in drilling through thick alluvium or highly altered rock. Mud rotary units typically consist of three large tandem axle carriers (rig, water truck, pipe truck) and a pickup truck to transport crews and supplies.

### **Core Drilling**

Core drilling would be typically used where conditions prevent the use of other types of drill rigs and where solid samples of rock are needed for geological, geotechnical, or metallurgical studies. A pre-collar would be installed prior to casing and core drilling. Core holes would be approximately 2,000 feet to 3,500 feet in depth, but could go as deep as 4,000 feet. Lubrication for core drilling would be provided by a thin slurry of bentonite, water and various viscosity modifiers and dispersants. In general, less fluid would be discharged from core drills than from the other two types of drilling methods. Core drilling units normally consist of two or three single-axle trucks (rig, water truck, pipe truck/service truck) and a pickup truck to transport crews and supplies. Core rigs may be truck- or skid-mounted.

### **2.2.2 Trenches**

Exploratory trenches for geological mapping and sampling purposes would be excavated by a Cat 225 trackhoe, D8N dozer, or equivalent. A total of 16,000 feet of trenches with anticipated dimensions of 12 feet in width x 5 feet in depth would be created. Trenching would occur intermittently throughout the year on a 12 hour per day schedule. The specific location of each trench would be determined in the field based on geologic information collected during the exploration program.

When trenches are excavated, topsoil would be removed and stockpiled separately on one side of the trench. Deeper soils and rock would be stockpiled on the opposite side of the trench. This would allow earth materials to be backfilled in approximately the same order in which they were removed, and would provide topsoil for the backfilled trench surface.

### **2.2.3 Exploration Drill Roads**

New roads would be required for drill rig access. Approximately 27,000 linear feet of exploration roads are proposed for 12.4 acres of disturbance. Roads would be constructed with a Cat D8N or equivalent dozer with a 12 foot blade width. Construction would be within a grade range of 0 to 10 percent where practicable, but grades may locally increase to 20 percent over short distances. Final road width should be less than 20 feet on average, but for the reclamation cost estimate it is assumed to be 20 feet. Where possible, overland travel, which would not require road construction, would be performed. Road construction activities would occur intermittently during the year on a 12 hour per day schedule, lasting no more than one month total per year. The specific location of each drill





road would be determined in the field based on geologic information collected during the exploration program.

Most new roads would be constructed with a bulldozer using "cut only" methods. "Cut only" would be necessary for most roads because level surfaces are essential for movement for the relatively top-heavy, truck-mounted drilling equipment.

Whenever possible, and primarily on reasonably level terrain, topsoil would be salvaged and stockpiled to the uphill margin of the road cut. On steeper slopes, topsoil would be stored as side cast along the periphery of the roads, pads, and sumps. Although this method would mix the limited existing quantities of topsoil with the subsoils, experience has shown that the resulting surface soils can support vegetation. RENV may elect to push topsoil uphill prior to cutting roads on steep slopes. However, this would result in increased surface disturbance due to bulldozers working "back-and-forth" below the proposed road.

Exploration road upgrading and maintenance procedures would include:

- installing drainage controls such as water bars, ditches, and culverts, if necessary, to control road damage, soil loss, and sediment impacts from erosion access during wet seasons;
- installing weed-free straw bales for sediment control.

#### **2.2.4 Ancillary Facilities**

No construction of ancillary facilities is proposed. One mobile storage trailer may be brought on site for materials storage during drilling periods. The trailer would be owned by contractors and would generally be removed on a seasonal basis and at the completion of this project.

#### **2.2.5 Equipment**

Equipment needed for construction and drilling activities would be used on an as-needed basis. A Cat D8N or equivalent dozer with a 12 foot blade width would be used for road and site construction. Drill rigs would be supported by a variety of equipment depending on the type of drill rig used. Water trucks, pipe trucks, booster trucks, a mud tank truck, a rubber tire backhoe, and light vehicles are all possible pieces of equipment that might be used. RENV could have a maximum of three drill rigs working in the area. Typically, only two drill rigs would be used, although if mud rotary is required three would be the maximum number of drill rigs used at any one time.





Specific drilling and support equipment may include the following:

- 1) One truck-mounted reverse circulation rig (such as an RD-10) including the following support vehicles:
  - two crew vehicles (4x4 pickups);
  - one 5,000-gallon water truck;
  - one pipe truck;
  - one pipe/crane truck;
  - one booster truck;
  - one auxiliary air compressor truck; and
  - one portable light plant/generator.
- 2) One truck mounted mud rotary rig (such as Failing 2500) including the following support vehicles:
  - two crew vehicles (4x4 pickup);
  - two 3,500-gallon water trucks;
  - two pipe trucks;
  - one mud tank truck;
  - one "dog house" supply truck;
  - one rubber tire backhoe; and
  - one portable light plant/generator.
- 3) One diamond core rig (such as Tonto Hydro 55) including the following support vehicles:
  - two crew vehicles (4x4 pickups);
  - one 3,500-gallon water truck;
  - two skid- or truck-mounted pipe carriers; and
  - one portable light plant/generator.
- 4) One forty foot enclosed trailer for mud supplies, which would occasionally include two mud engineer vehicles (4x4 pickups).
- 5) One five-ton flatbed truck for sample pick up.
- 6) One 4x4 pickup or van for down-hole survey contractor.
- 7) Two 4x4 pickups for Uranerz geological personnel.





### **2.2.6 Operating Schedule**

Exploration drilling activities would operate 24 hours a day (two-12 hour shifts), approximately 120 days per year (actual drill days), over a 6 month period, as conditions warrant.

### **2.2.7 Work Force**

RENV proposes to utilize a maximum of up to three drill rigs, with three contract employees per rig for a maximum drilling work force of nine contract employees. A maximum of two geologists, currently employed by RENV, would also be associated with this exploration project.

## **2.3 ENVIRONMENTAL PROTECTION MEASURES**

Design and construction of the proposed project disturbance would be conducted in a manner which eliminates the possibility of unnecessary or undue degradation of lands, or of disturbance to additional acreage not included in the Plan of Operations (POO). This would largely be accomplished by: constructing roads only where necessary to obtain geologic information; avoiding areas with known cultural resources; avoiding the existing heap leach pad, bio-reactor, and BLM catchment basin; taking precautionary measures to prevent wildfires; and performing cross country travel without blading where safe and practicable. Specific protection measures are provided below.

### **2.3.1 Air Quality**

RENV proposes to protect air quality during the project by watering constructed access and exploration roads, as necessary, to control dust. Water would be used to control dust when necessary for the reverse circulation drilling.

### **2.3.2 Solid Wastes**

All project-related refuse would be disposed at an approved landfill. No refuse would be disposed on site.

### **2.3.3 Hazardous Materials**

No hazardous materials, as defined by 40 CFR 302.4 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including the Emergency Planning and Community Right-to-Know Act (EPCRA), and the hazardous substances appendices of the Superfund Amendments and Reauthorization Act (SARA), would be used for this project. Hazardous wastes would not be generated in the project area. In the event regulated materials (i.e., diesel fuel) are





spilled, measures would be taken to control the extent of the spill, and the appropriate agencies, including the BLM, would be notified in accordance with the applicable Federal and State regulations.

#### **2.3.4 Water Resources**

All exploration drill holes at the project sites would be plugged according to the standards stipulated by Nevada Revised Statutes (NRS) 534.425 through NRS 534.428. Because of the significant drilling depths, RENV may want to re-enter drill holes and drill wedges from select drill holes. This would allow additional samples to be collected from each surface drill bore.

All holes would be plugged as an operational procedure immediately after completion of drilling; except that up to five holes may remain accessible for re-entry at any one time. If a hole is to be considered for possible re-entry at a later date during the project, these holes would be completed with abandonment mud, the surface casing would remain in place, and a temporary cap would be welded on to prevent wildlife access. Final plugging of the holes would be performed after re-entry drilling is completed.

Sediment control measures would be constructed when necessary to control sediment runoff and sedimentation. Sediment control structures would include, but would not be limited to, mud pits, silt traps and fences, sediment ponds, and/or settling basins. Straw bales, hay bales, or synthetic geotextile fabrics would be used to construct silt traps and fences. RENV would maintain these structures during the exploration activities. Upon completion of exploration activities and successful reclamation, sediment control structures would be removed or reclaimed.

#### **2.3.5 Wetlands, Riparian Zones**

All exploration activities would avoid wetlands, riparian zones, and drainages.

#### **2.3.6 Cultural Resources**

Uranerz would avoid all known cultural properties. Where existing access roads cross cultural sites, RENV would limit their activities to the road surface.

### **2.4 RECLAMATION**

The Plan of Operations/Reclamation Plan for the REN Exploration Project describes the detailed reclamation for this project. Reclamation for the public lands would be consistent with the requirements of NRS and Nevada Administrative Code (NAC) 519A regulations, 43 Code of Federal

which measures would be taken to control the extent of the spill, and the appropriate measures to be taken in accordance with the applicable Federal and State regulations.

#### 2.1.4 Water Resources

All exploration drill holes in the project area would be plugged according to the standards stipulated by Nevada Revised Statutes (NRS) 204.025 through NRS 204.038. Because of the significant drilling depth, RENV may have to re-enter drill holes and drill wedges from select drill holes. This would allow additional measures to be collected from each section drill hole.

All holes would be plugged as an operational procedure immediately after completion of drilling except that up to five holes may remain accessible for re-entry at any one time. If a hole is to be considered for possible re-entry at a later date during the project, these holes would be completed with abandonment mud. The surface casing would remain in place, and a temporary cap would be welded on to prevent wildlife access. Final plugging of the hole would be performed after re-entry is completed.

Sediment control measures would be considered when necessary to control sediment runoff and sedimentation. Sediment control measures would include, but would not be limited to, sand pits, silt traps and fences, sediment basins, silt fences, silt curtains, silt socks, silt bags, or silt curtains. RENV would maintain these structures during the exploration activities. Upon completion of exploration activities and successful reclamation, sediment control structures would be removed or reclaimed.

#### 2.1.5 Wetlands, Riparian Zones

All exploration activities would avoid wetlands, riparian zones, and drainages.

#### 2.1.6 Cultural Resources

Projects would avoid all known cultural properties. Where existing sources reveal no cultural sites, RENV would limit their activities to the road surface.

### 2.2 RECLAMATION

The Plan of Operations/Reclamation Plan for the RENV Exploration Project describes the detailed reclamation for this project. Reclamation for the public lands would be consistent with the requirements of NRS and Nevada Administrative Code (NAC) 204A regulations. All lands of Federal



Regulations (CFR) 3809, and in accordance with the "Nevada Interim Standards for Successful Revegetation" (BLM Instruction Memorandum No. NV-94-026).

RENV's objectives for the reclamation plan include minimizing or eliminating public safety hazards, stabilizing disturbed areas, and providing a post-mining surface condition that would be consistent with the long-term land uses. The primary long-term land uses are expected to be livestock grazing, wildlife habitat, and mineral resources activity. These objectives would be accomplished by utilizing the guidelines outlined in the Reclamation Plan, as submitted to the BLM in February 1997 (revised 1997). RENV would reclaim all existing and proposed disturbance that they have either caused under the Notice N16-96-027N or propose to cause with the approval of this POO. At this time, the revegetation of the REN mine site is the responsibility of the previous mine operator.

Regrading and revegetation of exploration roads, pads, and mud pits not necessary for additional exploration, as well as drill hole plugging, would be conducted concurrently over the three year project life. If mineralization is not encountered in a drill hole, the hole would be immediately plugged. If a drill road is not necessary for future exploration, it would be reclaimed during road construction the following season. In this way, disturbance and reclamation at project end would be minimized.

Flat roads or pads which do not require replacement of sidecast material would be reclaimed with a dozer/ripper to knock down and smooth any berms and relieve road bed compaction. Tire tracks (trails created by cross country travel and track rigs) would be lightly ripped to relieve compaction and prepare the seed bed. Rippers would be spaced so as to only rip the tracks and not disturb remaining vegetation.

Drill roads would be reclaimed with a dozer to replace cut material onto the roadbed. Fill material resulting from the road construction cuts would be pushed up onto the roadbeds to fill against the cut banks to restore the slopes to their original contour to the extent practicable. If possible, the equipment operator would replace excavated materials (topsoil and underlying weathered rock) in their approximate original position.

When trenches are excavated, topsoil would be removed and stockpiled separately on one side of the trench. Deeper soils and rock would be stockpiled on the opposite side of the trench. This would allow earth materials to be backfilled in approximately the same order in which they were removed, and would provide topsoil for the backfilled trench surface.





Following completion of earthwork, all disturbed areas would be seeded. Recontoured roads on steep slopes would be hand broadcast-seeded soon after recontouring when the fill soil is comparatively soft and loose. Seeding soon after recontouring also allows gravity, wind, and water to move soil and cover seeds. Roads on relatively level terrain would be ripped and broadcast-seeded. In general, earthwork and seeding would take place in the fall. The proposed reclamation plant list is provided in **Table 2-1**. Modification to the plant list and application rates would be developed through consultation with the approval by the BLM and NDEP.

## **2.5 ALTERNATIVE TO THE PROPOSED ACTION**

Exploration drilling is the only option for defining the nature and extent, shape, and economic value of precious metal-bearing deposits within the claim blocks. Therefore, no alternative action could be proposed that would allow evaluation of the geologic conditions at the target depths. Similarly, the location of the Project is confined by the claim boundaries and other alternatives are not possible. Alternatives to the locations of individual roads or drill sites are possible and could be relocated to accommodate resource concerns.

### **2.5.1 No Action Alternative**

Under the No Action Alternative, RENV's proposed Exploration Project would not be approved. RENV would not be able to further define and discover ore deposits on public lands. However, the Mining Law of 1872 grants the claim holder access and the right to explore their claims in a prudent and diligent manner.





**Table 2-1. Reclamation Plant Species List for the REN Exploration Project.<sup>1</sup>**

Scientific Name	Common Name
Grasses	
<i>Agropyron spicatum</i>	Bluebunch wheatgrass
<i>Elymus cinereus</i>	Great Basin wildrye
<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Oryzopsis webberi</i>	Webber ricegrass
<i>Stipa viridula</i>	Green needlegrass
<i>Festuca idahoensis</i>	Idaho fescue
<i>Poa sandbergii</i>	Sandberg bluegrass
<i>Agropyron trachycaulum</i>	Slender wheatgrass
<i>Poa canbyi</i>	Canby bluegrass
Forbs	
<i>Balsamorhiza sagittata</i>	Arrowleaf balsamroot
<i>Sanguisorba minor</i>	Small burnet
<i>Eriogonum</i>	Buckwheat
<i>Arabis</i>	Rockcress
<i>Astragalus cicer</i>	Chickpea miklvetch
<i>Hedysarum boreale</i>	Northern sweetvetch
<i>Penstemon palmeri</i>	Palmer penstemon
<i>Achillea millefolium lanulosa</i>	Western yarrow
<i>Linum lewisii</i>	Lewis flax
<i>Kochia prostrata</i>	Prostrate kochia
<i>Sphaeralcea coccinea</i>	Gosseberryleaf globemallow
Shrubs	
<i>Atriplex canescens</i>	Fourwing saltbush
<i>Purshia tridentata</i>	Antelope bitterbrush

<sup>1</sup> The final seed mix should contain at least 2-3 grasses and 1-2 forbs. If either one or both of the two shrubs are added to the seed mixture, then the amount of grass seed in the mixture should be reduced accordingly. When developing the seed mixture, the number of seeds should not exceed 30 seeds per square foot. The drill seeding application rate should be 5-6 pounds Pure Live Seed; the broadcast seed rate should be 1.5 times greater.





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### 3.0 AFFECTED ENVIRONMENT

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The REN Exploration Project area is located at the upper end of Little Boulder Basin, north of lower Bell Creek. Elevations within the Project area range from approximately 5,400 feet to 5,800 feet above mean sea level (AMSL).

#### 3.1 PROPOSED ACTION

The following critical elements of the human environment are not present or are not affected by the proposed action or alternative in this Environmental Assessment:

- Air Quality
- Areas of Critical Environmental Concern
- Farm Lands (prime or unique)
- Floodplains
- Native American Religious Concerns: The proposed Project is located within lands traditionally occupied by the Tosawihi Shoshone. This includes the northern tributaries of the Humboldt River extending from Golconda or Winnemucca on the west to the Independence Range on the east. Winter camps were located near perennial streams or springs, often along the Humboldt River. During the warm season the Tosawihi people spread across this "home territory" and into adjacent regions.

According to Shoshone oral tradition, Coyote was responsible for populating the Great Basin. Two women instructed Coyote to carry a water basket containing the Shoshone people with him. He was not to open the basket until reaching his destination. However, his curiosity got the best of him and he repeatedly opened the basket to peer inside. Each time the basket was opened people would escape. This accounts for the scattering of the Shoshone people over their large territory (Crum 1994). Traditionally the Shoshone have had close ties with the land. The earth is believed to be imbued with supernatural power and a major religious goal is the acquisition and use of power (Rusco and Raven 1992).

Two areas in the vicinity of the Project have been identified as having special importance to the Shoshone people (Rusco and Raven 1992:15). This includes the Tosawihi Quarry area approximately 10 miles northwest of the REN Project area, and a location along Rock Creek approximately 17 miles southwest of the REN Project area. Tosawihi's importance is tied to the presence of two power spots and





because it is the source of white chert that is considered by some to convey power or to aid in doctoring. Rock Creek also contains power spots as well as burials.

No such areas of importance have been documented for the Project area. As part of its legal obligation BLM consulted with Te-Moak Tribe of the Western Shoshone and the Western Shoshone Historic Preservation Society. An invitation to enter into consultation was initiated by the BLM to both groups on February 12, 1997. Over the next 6 months the BLM solicited comments and recommendations through several methods, including phone calls, field site tours, and letters. As of August 12, 1997, the Te-Moak Tribe had not provided any information to support the presence of important traditional cultural properties in the Project area. Therefore, the BLM sent a letter requesting information and comments by September 9, 1997; if no comments were received, the BLM would consider consultation complete. Comment letters were received from the Western Shoshone Historic Preservation Society and the Duck Valley Tribe. Both comment letters were general in nature and did not identify any traditional cultural or sacred properties as being present.

A chronology of the Native American Consultation is as follows:

- 2-12-97 The BLM sent a letter to the chairpersons for the Wells Band Council, Southfork Band Council, Te-Moak Tribe of Western Shoshone, Battle Mountain Band Council, Elko Band Council, and director of the Western Shoshone Historic Preservation Society (WSHPS) initiating consultation on the REN Exploration Project.
- 2/24/97 The BLM receives a letter from the Southfork Band Council stating they have no concerns or comments on this Project.
- 4/22/97 The BLM phoned the chairpersons for the Wells Band Council, Te-Moak Tribe of Western Shoshone, Battle Mountain Band Council, Elko Band Council, and director of the WSHPS and left messages requesting a return call to discuss comments/concerns regarding the REN Exploration Project. The BLM faxed a copy of the consultation letter to the Nevada Indian Environmental Coalition (NIEC) as requested by the Te-Moak Tribe of Western Shoshone.
- 5/12/97 The BLM phoned the Western Shoshone and Elko Band Council and left messages. The BLM phoned the Nevada Legal Services. They requested a field trip to the Project area in two weeks.
- 5/29/97 The BLM hosted a field trip to the Project area with a representative from the Duck Valley Tribe. This field trip was originally scheduled





for another project, however, since the REN Project was in the vicinity, the REN Project was included in the tour.

- 6/4/97 The BLM sent a letter to the Duck Valley Tribal Council requesting comments/concerns on the REN Exploration Project.
- 6/9/97 The BLM phoned the chairpersons for the Wells Band Council, Southfork Band Council, Te-Moak Tribe of Western Shoshone, Battle Mountain Band Council, and Nevada Legal Services to schedule a field trip to the Project area. The field trip was tentatively scheduled for 6/24/97.
- 6/12/97 The BLM sent a letter to the chairpersons for the Wells Band Council, Southfork Band Council, Te-Moak Tribe of Western Shoshone, Battle Mountain Band Council, Nevada Legal Services, and the director of WSHPS to schedule the field trip to the Project area on 6/24/97.
- 6/20/97 The BLM receives a letter from Nevada Legal Services. The Nevada Legal Services would be consulting with the NIEC, the Te-Moak Tribe, and the Battle Mountain Band to determine if June 24, 1997 is a convenient day to conduct a field trip to the REN Exploration Project.
- 6/23/97 The BLM phoned the Nevada Legal Services and left a message to confirm the field trip for 6/24/97. The Nevada Legal Services phoned the BLM and left a message stating the field trip had been rescheduled for 7/1/97.
- 6/24/97 The BLM phoned the Nevada Legal Services confirming the field trip scheduled for 7/1/97.
- 7/1/97 The BLM hosts a field trip to the REN Exploration Project with representatives from the Battle Mountain Band Council, NIEC, Nevada Legal Services, and three job training program students.
- 7/25/97 The BLM sent a letter to the chairpersons of the Te-Moak Tribe of the Western Shoshone and the Battle Mountain Band Council requesting comments regarding consultation on this Project. The letter stated that if no response is received by August 12, 1997, the BLM would consider consultation completed as of that date.
- 7/29/97 The BLM phoned the chairpersons for the Elko Band Council, Te-Moak Tribe of Western Shoshone, Duck Valley Tribe, Wells Band





Council, Battle Mountain Band Council, and the director of the WSHPS to review the chronology of correspondence requesting comments or concerns, to remind them of the field trip that had been scheduled for 7/1/97, and to inform them that the comment period would end on 8/12/97. The Duck Valley Tribal Council requested a meeting scheduled for 8/12/97.

- 7/31/97 The BLM sent a letter to the chairpersons for the Te-Moak Tribe of Western Shoshone, Duck Valley Tribe, Elko Band Council, Battle Mountain Band Council, Wells Band Council, Southfork Band Council, and the director of the WSHPS notifying them of the consultation meeting scheduled for 8/12/97 to discuss the REN Exploration Project.
- 8/12/97 The BLM held a consultation meeting with the Native Americans to discuss the REN Exploration Project. No specific comments related to the Project were voiced.
- 8/29/97 The BLM sent a letter to the chairpersons for the Te-Moak Tribe of Western Shoshone, Duck Valley Tribe, Elko Band Council, Battle Mountain Band Council, Wells Band Council, Southfork Band Council, and the director of the WSHPS notifying them that unless the BLM received information requested on traditional cultural or sacred properties in relation to this Project by September 9, 1997, the BLM would consider consultation completed.
- 9/5/97 The BLM receives a letter from the director of the WSHPS regarding the BLM letter dated 8/29/97. Comments received were general and provided no information of or about any traditional cultural or sacred properties being present.
- 9/9/97 The BLM receives a letter from the chairperson of the Duck Valley Tribe regarding the BLM letter dated 8/29/97. Comments received were general and provided no information of or about any traditional cultural or sacred properties being present. Although we closed consultation after a lengthy time period had passed, BLM still had not received any specific comments related to the project.
- **Paleontological Resources:** Paleontological resources in northeastern Nevada generally consist of vertebrate, invertebrate, and paleobotanical fossils. Paleontological sensitivity of each geologic unit present in the project area is as follows:





**Vinini Formation** -- This is a deep ocean Ordovician formation which contains abundant invertebrates such as graptolites and conodonts (Rubens et al. 1967, Stewart and McKee 1977). The Ordovician-aged rocks were formed at a time when there were very few vertebrates on a world-wide basis and the depositional environment of the entire western assemblage was predominantly deep marine, not the environment of early vertebrates. There are no known occurrences of vertebrate fossils within this unit and the sensitivity of this unit is considered to be low.

**Roberts Mountains Formation** -- This widespread predominantly carbonate unit occurs throughout Elko and parts of Eureka Counties, and is everywhere fossiliferous, although the fossils are intermittent along strike. The majority of paleontological resources from this unit consist of assemblages of marine invertebrates. Potential for the Roberts Mountains Formation to contain vertebrate fossils is considered to be low to moderate.

**Carlin Formation** -- Vertebrate fossil resources (mammals) of Miocene age have been recorded in the Humboldt Formation, which includes the Carlin Formation (Smith and Ketner 1976). These include camelids (*Protolabis* sp. and others), horses (*Merychippus* sp.), rhino (*Aphelops* sp.), and a *Tomarctus*-like canid (summarized in Smith and Ketner 1976, Firby and Schorn 1983). The James Creek location also revealed significant mammalian fauna (Firby 1990). Although all these locations are 20 or more miles from the Project area, their presence does establish that vertebrate fossils occur in the Humboldt (Carlin) Formation. The laterally discontinuous nature of these Tertiary-aged sediments makes correlation to distant sites difficult. Since 1981, over 16,000 acres of surface disturbance has occurred in the Carlin Trend area and only one significant fossil grouping has been discovered. The paleontological significance of the Carlin Formation should be considered as moderate.

**Quaternary Alluvium** -- This material is derived from a discontinuous group of sediments more or less contemporaneous from several different sources, this alluvium/colluvium cannot be considered to comprise a single lithologic unit. The cherty gravels and sands of this unit indicate that the depositional environment was not favorable for preservation of vertebrate paleontological resources. Overall potential for rocks mapped as Quaternary alluvium within the Project Area to contain fossils is considered to be low.

- Wastes (hazardous or solid)
- Water Quality (drinking/ground)
- Wetlands/Riparian Zones
- Wild and Scenic Rivers
- Wilderness
- Environmental Justice





Bureau specialists have further determined that the following resources, although present in the Project area, are not affected by the proposed action:

- Recreation
- Socioeconomics
- Geology: The geology in the vicinity of the REN Exploration Project is dominated by north-south trending fault-block mountain ranges which, in northern Eureka County and southern Elko County, expose sedimentary rocks of Paleozoic age in the northern end of the Lynn-Railroad Mineral Belt, also known as the Carlin Trend. These rocks include interbedded siliceous siltstones, siltstones, argillites, and cherts of the Ordovician Vinini Formation. Underlying the Vinini Formation is the Roberts Mountain Formation, also Paleozoic in age. It consists of platy, silty limestone, dolomite, and carbonaceous dolomite. This formation is not exposed at the surface in the project area and is only encountered in drill holes. On the margins of the higher elevation outcrops, the Paleozoic rocks are mantled by soft, muddy, tuffaceous siltstone, sandstone, and conglomerate of the Tertiary Carlin Formation. In the valleys bordering the Tuscarora Mountains, bedrock is overlain by varying thicknesses of unconsolidated Quaternary alluvium. The major structural features are high-angle normal faults and low-angle thrust faults. There are three main high-angle normal fault trends in the vicinity of the project area, northwesterly, northeasterly, and northerly. The rocks of the Vinini Formation are commonly fractured and folded with varying degrees of intensity.
- Lands: Access to the project area can be achieved by traveling west along Interstate Highway 80 for approximately 46 miles to Dunphy and then north on the Boulder Valley all-weather road 26 miles to the Bootsrap Haul Road and the project area. Access to the project site crosses private land (Newmont Gold Company and Elko Land and Livestock). RENV has initialized an agreement with Newmont Gold Company and Elko Land and Livestock to access the property.

**Figure 1-2** depicts the proposed REN Exploration Project and land status of the Project area which would occur within portions of Sections 1, 2, 11, and 12, Township 36 North, Range 49 East and Sections 35 and 36, T37N, R49E.

RENV controls the mining claims within the project area which are staked for locatable minerals. The only right-of-way located within the project area is for the Coyote 1 power line (N-4775). This 120kV line crosses the NE corner of the claimblock.

- Livestock Grazing: The project is located within the 25 Allotment and the T Lazy S Allotment. Portions of the Project occur within the Boulder Seeding Pasture, Boulder Creek Pasture, and the Bull Field of the 25 Allotment. The sole permittee of this





allotment is the 26 Ranch, Inc. A temporary loss of between 3.5 and 7 AUMs would occur, but represents less than one percent of the total grazing privilege for the allotment (including 176 AUMs that are temporarily lost due to mining in other areas of the allotment). There would be no temporary reductions made to the permit at this time.

The portion of the T Lazy S Allotment (Elko Land and Livestock, permittee) which occurs within the claimblock and is closed to grazing. The allotted animal units per month (AUMs) associated with this area have already been suspended and are not part of the active grazing preference. Therefore, no reduction in grazing or additional suspension of AUMs would occur due to this Proposed Action.

The allotment boundary fence between the T Lazy S Allotment and the 25 Allotment (JDR # 5132), as well as other pasture fences, occur within the project boundary. It is critical that these fences remain in place and that the gates are kept closed during the life of this project so that trespass situations do not occur.

### **3.1.1 Water Resources**

**Surface Water.** The RENV Claim Block falls within the boundaries of six ephemeral watersheds, draining into both Bell Creek to the southeast, and Boulder Creek northwest of the project area. Most of these drainage basins are quite small and do not contribute significant quantities of water into the larger streams. Peak runoff events in the area usually occur annually between April and June during the snowpack thaw. High intensity rainfall events in the form of summer thunderstorms are also responsible for producing short duration runoff peaks.

The project area is contained largely within the Bell Creek drainage basin which is ephemeral from the project site downstream to the confluence with Rodeo Creek located approximately 2.5 miles south. The 8,067-acre Bell Creek watershed splits into two major forks just upgradient of the project site. Several areas of groundwater discharge occur throughout the Bell Creek drainage basin. Foremost among these areas are the springs located in the upper part of the watersheds in each of the major drainages within Bell Creek watershed. These springs are, in part, responsible for the perennial flow at the upper reaches of Bell Creek. Several springs are located east of the RENV Claim Block boundary. These springs generally occur at the lithologic contact between the Tertiary Carlin Formation and the Paleozoic Vinini Formation.

A BLM catchment pond (Ding Dong Wash Detention Dam, JDR# 1105) is located in the southern part of the RENV Claim Block. This pond collects runoff from a 359.1 acre drainage basin and is often dry, even during the spring months. The catchment is still operable. On April 8, 1997, the





water level in this catchment pond was only several feet below the culvert overflow outlet. The dam is fully stabilized with brush and grass, and the pond is still at least 10 feet deep at the dam. The overflow spillway is functional, although it does not appear to have passed large enough flow to produce a noticeable channel downstream. Its estimated capacity is approximately 9 acre-feet.

To the west of this dam in the next drainage, Dee Gold constructed a sediment pond which is also still functional. The pond, located between the existing REN pit and leach pad, catches sediment that may come off of the Ren Mine facility.

The smallest of the three ponds is located down gradient of the leach pad due west of the sediment control pond constructed by Dee Gold. It contained some water on April 8, 1997, but not enough to maintain water into the summer months.

**Groundwater.** Groundwater was encountered at depths below the ground surface between 52 feet and 485 feet depth (elevations of 5,110 to 5,765 AMSL) prior to dewatering by neighboring mines (BLM 1989). The large variations in groundwater depths are likely due to the irregularity in fracture densities in the rock medium which control the relative water levels. Dewatering by neighboring mines has subsequently lowered the water table to between 1,400 and 1,700 feet below ground surface (Houston 1997).

Groundwater in the area is contained primarily within the Carlin and Vinini Formations. The Tertiary Carlin Formation is composed of a tuffaceous sandstone and siltstone interbedded with Paleozoic conglomerate sediments. The Paleozoic Vinini Formation is composed of siliceous siltstones, siltstones, and cherts. The Vinini is underlain by the deeper Roberts Mountain Formation composed of platy, silty, limestone, dolomite, and carbonaceous dolomite. The general faulted and fractured nature of these rocks contribute to the secondary permeability responsible for aquifer containment and groundwater migration. Permeability measurements have not been tested on the geologic units in which the aquifer is contained.

Recharge to the local water table occurs both on site and in the Tuscarora Mountains to the east. The direction of groundwater flow generally follows the natural landform gradients. Direction of flow would therefore be westward contributing to the flow of Boulder Creek in the northern portion of the RENV Project area, and southward contributing to flow in Bell Creek in the southern portion of the Block.





### **3.1.2 Soils**

Soils within the RENV Block are comprised of three major associations (USDA 1980). Although the Chen-Pie Creek-Ramires (CC) association dominates the block, the Cherry Spring-Cortez-Chiara (CG) and the Stampede-Donna (SR) associations are common in that portion of the project area where soil disturbance would occur from exploration operations.

Order III soils data, including the soil series, surface texture, taxonomic classification, landscape position, elevation of the individual soils that occur in each association, permeability, available water capacity, wind and water erosion hazard, percent slope and approximate solum range are provided in **Table 3-1**. Suitability of these soils for rangeland seedings is considered very poor to fair. Major limiting factors are shallow depth to clay layer, low water availability, and extremely stony, cobbly, or gravelly surface layer. However, successful revegetation of these soils was achieved by Dee Gold Mining Co. following closure of the REN Mine.

### **3.1.3 Vegetation**

The entire project area has been subjected to wildfires which, along with historic livestock grazing, have drastically altered the native plant communities. Following the wildfires that occurred in 1964, attempts were made to rehabilitate burned areas by seeding primarily crested wheatgrass where seeding equipment could negotiate the terrain. In the project area, approximately 75 acres were reseeded (Rodeo Creek Seeding, JDR # 1070). Present vegetation on the seeded areas consists mainly of cheatgrass, crested wheatgrass, bottlebrush squirreltail, annual forbs, and islands of sagebrush/rabbitbrush. Vegetation of the unseeded areas currently consists of early sagebrush, big sagebrush, antelope bitterbrush, green rabbitbrush, bluebunch wheatgrass, Thurber needlegrass, Sandberg bluegrass, cheatgrass, buckwheat, phlox, lupine, and other grasses and forbs.

Reclamation of the REN Mine by Dee Gold Mining Company included revegetation with crested wheatgrass, Russian wildrye, fourwing saltbush, forage kochia, shadscale, Palmer penstemon, small burnet, and yellow sweetclover. Some sagebrush, rabbitbrush, cheatgrass, lupine, and several additional forbs have established as well.

### **3.1.4 Wildlife**

The game species that commonly inhabit the general vicinity are mule deer, sage grouse, chukar, Hungarian partridge, and mourning dove.

Mule deer use the area primarily for transitional range, and as winter range during relatively mild winters. The open terrain and lack of escape and thermal cover severely restricts winter use by deer





**Table 3-1. Soil Types and Suitability Characteristics--REN Project Area.**

USDA-SCS Map Unit	Soil Series & Surface Texture	Classification	Elevation (feet)	Permeability	Available Water Capacity	Water Erosion Hazard	Wind Erosion Hazard	Landscape position/ % Slope	Approximate Solum Range (inches)
CC Chen-Pie Creek-Ramires.Assn.	Chen cobbly loam	clayey-skeletal, montmorillonitic, frigid Lithic Argixerolls	5,500 to 6,500	very slow	very low	high	slight	uplands 8-30	12 to 20
	Pie Creek cobbly loam	very-fine, montmorillonitic, frigid Aridic Palexerolls	5,500 to 6,500	very slow	low	high	slight	rolling upland hills 15-30	24 to 40
	Ramires very stony loam	fine, montmorillonitic, frigid Aridic Calcic Argixerolls	5,500 to 6,500	slow	low	high	moderate	inter-spersed 15-50	20 to 32
CG Cherry Spring-Cortez-Chiara Assn.	Cherry Spring silt loam	fine-loamy, mixed, mesic Haploxerollic Durargids	4,800 to 5,200	moderately slow	moderate	moderate	moderate	dissected terraces 2-8	20 to 40
	Cortez silt loam	fine, montmorillonitic, mesic Xerollic Nadurargids	4,800 to 5,200	slow	low	moderate	moderate	alluvial fans and terraces 2-8	22 to 36
	Chiara silt loam	loamy, mixed, mesic, shallow Xerollic Durorthids	4,800 to 5,200	moderate	very low	moderate	moderate	alluvial fans 2-30	7 to 13
SR Stampede-Donna Assn.	Stampede gravelly loam	fine, montmorillonitic, frigid Aridic Durixerolls	5,500 to 6,200	very slow	low	moderate	moderate	alluvial fans and terraces 0-15	20 to 32
	Donna gravelly loam	Very-fine, montmorillonitic, frigid Abruptic Aridic Durixerolls	5,500 to 6,200	very slow	low	moderate	moderate	alluvial fans and terraces 2-8	20 to 26

Source: USDA 1980.





when snow cover is present. The project area also falls within a historic migration corridor (Wilkinson 1997). Deer typically winter to the south of the Project area adjacent to the Boulder Flats. Deer use during the summer is also restricted due to the open terrain and lack of cover, especially on the terraces and foothill slopes.

Some antelope use the project area during spring and summer. Most antelope use occurs west of Boulder Creek along the Antelope Creek drainage. However, NDOW considers the project area to be antelope habitat.

Raptors, as a group of species sensitive to human activity and development, are protected by both federal and state laws. The project area primarily provides the foraging area component of raptor habitat. The few rock outcrops and the existing REN pit on the project area serve as hunting perches and nest site locations for raptors.

The brush covered floodplains of Bell Creek harbor populations of lagomorphs, small rodents, passerine birds, and mammalian predators. These species also occur in the upland habitats of the project.

### **3.1.5 Threatened, Endangered, and Nevada State Sensitive Species**

The U.S. Fish and Wildlife Service (USFWS) and the Nevada Natural Heritage Program (NNHP) were consulted during March 1997 to determine the potential for occurrence of threatened or endangered species within the vicinity of the REN Exploration Project. In addition, the recently issued (April 1997) BLM Nevada State Sensitive Species listing was reviewed to determine if any special status species might inhabit the REN Exploration Project area. The following paragraphs summarize the results of the inquiry.

**Plants.** Currently, no threatened, endangered or Nevada State Sensitive Species of plants have been recorded on or near the RENV Claim Block.

**Wildlife.** The USFWS and NNHP identified both the threatened Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) and the spotted frog (*Rana pretiosa*), a candidate species, as having potential to occur within the project area. However, no suitable habitat is present for these species within the project area.





In addition, the USFWS and NNHP also identified six species from the BLM Nevada State Sensitive Species list that may occur in the project area. A discussion of each species and its potential to occur within the Project area is given below.

***Townsend's Big-eared Bat*** (*Corynorhinus [Plecotus] townsendii pallescens* and *C.t. townsendii*). These subspecies occur in juniper-pine forests, shrub-steppe grasslands, deciduous forests, and mixed coniferous forests from sea level to 10,000 feet in elevation (USDA 1991). Jameson and Peeters (1988) state that western big-eared bats occur in desert scrub and pinyon-juniper associations. Townsend's big-eared bats roost primarily in caves or cave analogs such as old mine shafts (Pierson et al. 1991), but have also been known to utilize rocky outcrops and old buildings.

Western big-eared bats have been recorded on the North Fork of the Humboldt River (Ports 1997) and 5 miles south of the Project area (BLM 1996b). A big-eared bat roost has been located in the Northern Tuscarora Mountains near Mount Blitzen (Bradley 1997).

***Small-footed myotis*** (*Myotis ciliolabrum*). The small-footed myotis is distributed throughout the western United States except for the northern Pacific coastal areas. This species tends to occur around rocky environments and may also be found in a variety of other habitats such as forest, near watercourses, and even in desert-like areas in central Idaho (Zeweloff 1988). The species forages on insects while flying low among the trees or brush (Arizona Game and Fish Department 1993). This species may forage in the vicinity of open water (springs or creeks) occurring within the project area. Adits in the area may provide roosting sites. The small-footed myotis have been sighted within approximately 10 miles southwest of the project area.

***Long-eared myotis*** (*Myotis evotis*). The main habitat of the long-eared myotis is coniferous forests occurring in the mountains. This species is most often found in pinon-juniper communities. Roosting areas can be found in buildings, hollow trees, caves, mines, cliff crevices, and sink holes. Moths are the preferred food source for the long-eared myotis; foraging occurs at relatively low temperatures (Manning and Jones, 1989). No sightings of this species have been reported within the project area to date.

***Fringed myotis*** (*Myotis thysanodes*). The fringed myotis generally occurs throughout most of the intermountain region. This species inhabits a wide variety of environments, from desert scrub communities to fir tree stands in the mountains. Pinyon woodlands and oak communities seem to be the most commonly used habitat types. These bats have been found in caves, mine tunnels, and





buildings. Due to the lack of roosting habitat within the vicinity of the project area, the presence of the fringed myotis within the area is unlikely. No sightings of the fringed myotis have been recorded in this area to date.

**Long-legged myotis** (*Myotis volans*). The long-legged myotis inhabit western North America, occurring at elevations ranging between 4,000 and 9,000 feet. This bat species inhabits primarily pinyon-juniper, oak, and coniferous forests, but may also be found along water courses and in desert habitats (Zeweloff 1988). This species roosts in buildings, rock crevices, cliffs, and trees. In many areas they are known to be associated with water and are often observed flying 10 to 15 feet over ponds, streams, water tanks, and open meadows (Arizona Game and Fish Department 1993). The species has also been observed foraging in forest openings. Caves and mine tunnels are used for hibernation roosts (Warner and Czaplewski 1984). No sightings of this species have been recorded in the project area. However, the long-legged myotis may forage in the vicinity of open water occurring within the project area.

**Western Sage Grouse** (*Centrocercus urophasianus*). Sage grouse historically inhabited the sagebrush lands of Little Boulder Basin, Bell Creek, and Boulder Creek. The presence of small meadows along the creeks with adjacent sagebrush covered benches and hills provided favorable habitat for sage grouse production. A strutting ground or lek was located in section 36, T37N, R49E. A field visit conducted in April 1997 to determine if this lek was recently active revealed no evidence of recent use. The 1964 fires and subsequent rehabilitation of the range with perennial grasses, as well as invasion by cheatgrass, have greatly diminished the value of this habitat to sage grouse. However, the fires missed many portions of the upper Bell Creek watershed and sage grouse habitat is available in the drainage. It is likely that this species occurs seasonally within the Project area.

### 3.1.6 Visual Resources

The RENV project area is situated on land designated as Visual Resource Management (VRM) Class IV by the BLM. The objectives for Class IV are to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.





The landscape is pediment slopes and the narrow brush-covered floodplain of Bell Creek. This landscape of low hills and valley slopes covered with open sagebrush is typical of lower elevations in northern Nevada. The background from along the Bootstrap Road is the higher Tuscarora Mountains. Previous mining exploration activity and post-wildfire seedings have modified the form, line, color, and texture of some of the natural features in the vicinity of the project area.

### **3.1.7 Cultural Resources**

Human occupation of northeastern Nevada, in which the project area is located, apparently began as early as 12,000 years ago, and has continued intermittently up to the present. Archaeological surveys conducted in the vicinity of the project area have uncovered evidence of this prehistoric occupation.

The southern portion (520 acres) of the RENV Claim Block was surveyed for cultural resources in 1988 (BLM1-1203(P)) and the northern portion (1,320 acres) was surveyed in 1992 (BLM1-1664(P)). Several other linear surveys were also conducted for right-of-ways and access. Six eligible cultural properties have been located within the RENV Claim Block: CRNV-12-11224, CRNV-12-11226, CRNV-12-11229, CRNV-12-11187, CRNV-12-7209, and CRNV-12-11206. Three other eligible cultural properties have been located partially within the RENV Claim Block: CRNV-12-7103, CRNV-12-7568, and CRNV-12-11166 (BLM1-1988(P)).

## **3.2 NO ACTION ALTERNATIVE**

The description of the affected environment for the No Action Alternative would be the same as that for the proposed action.





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## 4.0 ENVIRONMENTAL CONSEQUENCES

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### 4.1 PROPOSED ACTION

#### 4.1.1 Water Resources

**Surface Water.** Proposed exploration activities would avoid all surface water. Therefore, the proposed REN Exploration Project would not result in direct impacts to surface water resources. The REN Exploration Project does have the potential to create erosion and increase sediment from the development of exploration roads, drill site, and trench preparation. Proposed environmental protection measures, identified in Section 2.3, would keep indirect impacts to surface waters to a minimum by using Best Management Practices. Should indirect impacts to water resources occur, they would be only temporary; lasting until drill holes are plugged and exploration roads, drill sites, and trenches are successfully reclaimed with vegetation.

**Groundwater.** Proposed exploration activities would not result in direct impacts to groundwater resources. Environmental protection measures, as outlined in the Proposed Action, and compliance with Nevada statutes for drill hole plugging would minimize the potential for any foreign material to enter drill holes. Some mixing of aquifers by leakage of groundwater from one aquifer to another through drill holes may occur. However, due to the dewatering in the region from neighboring mines, the only water that would be encountered would be perched aquifers, and the potential mixing of these waters is not likely to result in any impacts, or the impacts would be short-term and temporary until drill holes are plugged. All drill holes would be plugged in accordance with NAC 534 regulations and as stated in section 2.3.4.

#### 4.1.2 Soils

Direct impacts to soils would result from the construction, development, and use of access roads, drill sites, sumps, and trenches. These impacts include modification of soil physical characteristics, loss of soil to wind and water erosion, and decreased soil biological activity. Changes would result from mixing soil horizons which reduces the organic matter content of surface soil and lowers soil productivity. Total disturbance to soil resources from the proposed project would be approximately 30 acres.





When exploration roads are developed, soils salvaged would be bermed on the side. The maximum amount of displaced soil would not occur all at once, nor at one location, but would occur as drill sites, roads, and trenches would be developed. Therefore, impacts to soils would be dispersed throughout the project area and would occur sporadically during the three-year period. Soil losses from wind or water would be temporary, lasting until drill sites, roads, and trenches are successfully reclaimed with vegetation.

#### **4.1.3 Vegetation**

The direct impact from the proposed project would be the disturbance of 30 acres of sagebrush-rabbitbrush-grassland communities. RENV plans to revegetate exploration disturbance as described in Section 2.4 (Reclamation). Exploration would utilize Best Management Practices to keep direct impacts to vegetation to a minimum. After project exploration activities cease, vegetation would gradually become reestablished in disturbed areas by both reseeding and recolonization.

Exploration disturbances would be primarily short-term and linear (roads) or patchy (drill sites) in form. This type of development would be relatively open to recolonization, through secondary succession, of vegetation from the surrounding areas.

#### **4.1.4 Wildlife**

The REN Exploration Project would result in the temporary loss of 30 acres of wildlife habitat widely distributed throughout the 1,840-acre project area over the three-year project life. Impacts to wildlife would consist of temporary habitat loss, wildlife displacement as the result of removal and/or crushing of vegetative cover, and disturbance from human activity and noise. Nesting habitat for shrub and ground nesting birds may be removed for the short-term until reestablishment of shrub species occurs following reclamation. Soil disturbances and compaction may destroy animal burrows, injure or kill less mobile animals, or trap animals in deep burrows. Activities associated with the proposed exploration may be sufficient to cause mammals, birds, and reptiles to avoid use of suitable habitat in the project area. Wildlife may tend to avoid active drilling sites and may move temporarily to adjacent habitat which would increase population in those areas. Impacts to wildlife habitat would not be large enough to eliminate individual wildlife territories or populations.

Raptors, such as the red-tailed hawk and Swainson's hawk, may forage over the project area; however activities resulting from the REN Exploration Project are not anticipated to impact any raptor species. The existing REN pit has been used as a nesting site for red-tailed hawks and great





horned owls over the last few years. A field visit in April 1997 revealed that the red-tailed hawk nest was active in the pit, although the great horned owls were not seen.

#### **4.1.5 Threatened, Endangered, and Nevada State Sensitive Species**

**Plants.** No threatened, endangered, or Nevada State Sensitive Species are known to occur on the Project area; therefore, no impacts from the Proposed Action to such species are anticipated.

**Wildlife.** No suitable habitat occurs within the REN Exploration Project area to support fringed myotis, long-eared myotis, or Pacific Townsend's big-eared bat. Therefore, no impacts would occur to these species as a result of the REN Exploration Project. The other bat species discussed in Section 3.1.5 above, would only be affected if foraging areas were impacted by the proposed exploration project. These species typically forage over or near open water, and over forested or shrub habitats. RENV's proposed exploration activities would not occur near springs or creeks and the three catchment ponds would not be disturbed. The loss of 30 acres of grass-shrub habitat over the 1,840-acre RENV Claim Block would not have measurable impact on the foraging habitat for these species. No historic mine workings (shafts or adits) exist that would be considered potential roosting habitat. There is potential for roosting to occur in the crevices of the walls of the REN pit, however, no disturbance is planned for the pit area. Therefore, impacts to these species are not anticipated.

No impacts to sage grouse would occur due to the dispersed nature of the disturbance and the marginal quality of much of the existing habitat to support sage grouse. The strutting ground or lek that has been documented on the Project area was not active in 1997. The potential exists for the drilling activities to disrupt breeding activities at this lek if it becomes active in the future and the drilling were to occur in close proximity to the lek. Because the lek is located in the area of diffuse exploration area and drill holes have not been precisely located, it is likely that the lek would not be disturbed.

#### **4.1.6 Visual Resources**

Short-term impacts would result from the proposed action. The horizontal and shallow diagonal bands and lines from the exploration roads, trenches, and drill pads would create moderate form and line contrasts with the characteristic landscape. Moderate color contrasts would result from the vegetation removal associated with road and drill pad construction.





Successful reclamation of the exploration roads, trenches, and drill pads would reduce the long-term visual impacts of the proposed action. Class IV VRM objectives would be met.

#### **4.1.7 Cultural Resources**

No impacts to known cultural properties are anticipated due to the Environmental Protection Measures outlined in Section 2.3.6 to avoid sites. However, the locations of some cultural properties as mapped are in question. Therefore, some potential exists to impact cultural resources by accidental disturbance to the known sites, as well as to potential unknown subsurface sites. Accidental disturbances could consist of scraping, compacting, or covering these identified and any unrecognized sites. In the event that new cultural sites are discovered, Uranerz, or its contractors, would cease activity and notify the BLM authorized officer immediately.

### **4.2 NO ACTION ALTERNATIVE**

Implementation of the No Action Alternative would result in the denial of the REN Exploration Project and the proposed 30 acres of disturbance would not occur. Consequently, all resources discussed in Chapter 4.0 would remain intact and impacts from exploration activities would be non-existent.

### **4.3 MITIGATION**

#### **4.3.1 Wildlife**

Prior to commencing or continuing exploration activities during the fall and spring periods, RENV would consult with the BLM Authorized Officer concerning possible cessation of drilling activities from November 16 to March 15. This action would minimize stress to migrating mule deer. In addition, a seasonal restriction within a 0.3 mile radius of the sage grouse strutting ground in Section 36 of T37N, R49E from March 1 to May 15 would be required, provided the strutting ground is active.

#### **4.3.2 Cultural Resources**

Uranerz would avoid all known cultural properties by demarcating avoidance zones which would include the recorded cultural properties. The avoidance zones would encompass an area around the cultural site(s) consisting of a minimum buffer of 60 meters (200 feet). The avoidance zones would





be indicated on the ground by use of existing surface features (e.g., roads or fences) when such features are reasonably unique and obvious so as not to be misidentified. Where no such features exist, steel t-posts would be installed along the boundary at approximately 100 meters (328 feet) apart. Shorter or longer distances would be depending on topography and field of view.

All personnel employed by Uranerz or its contractors would be notified of the existence and whereabouts of all avoidance zones. All personnel would be directed not to enter any avoidance zone under penalty of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).

Should the results from exploration drilling outside of the avoidance zones necessitate that areas within the avoidance zone be subject to drilling or access road construction, the following measures would be undertaken prior to initiating any surface disturbing activities:

- 1) A description of proposed activities and a location map would be submitted to BLM.
- 2) A qualified archaeologist would be enlisted to relocate the cultural site(s) that could be impacted by the exploration activity.
- 3) An exclusion zone would be established around the cultural site(s) by staking and/or signing with steel posts to ensure that a visible barrier is present between the cultural site and the surrounding operations area in order to protect the cultural site(s) from damage.
- 4) Exclusion barriers would be placed a minimum of 60 meters (200 feet) from the perimeter of the cultural site(s). Where existing roads traverse the site and/or are adjacent to the perimeter of the cultural site(s), exclusion barriers would be placed along the roadside.
- 5) Maintenance to existing roads within an exclusion zone would be restricted to limits of the existing road berm.

In the event an eligible or unevaluated cultural site is subsequently found to have been damaged by activities associated with the proposed action, Uranerz would draft a data recovery plan for the affected site(s) within three months. After the data recovery plan has been accepted by the BLM and





SHPO, Uranerz would implement data recovery at the affected cultural site(s) within one year of the date of acceptance of the data recovery plan by the BLM and SHPO.

#### 4.4 CUMULATIVE IMPACTS

All resource values have been evaluated for cumulative impacts. As a result of the Proposed Action, it has been determined that cumulative impacts would be negligible for most resources. The Proposed Action would result in a short-term incremental impact to wildlife resources. A four-year reasonably foreseeable time frame was used for this analysis. Reasonably foreseeable future actions beyond the Proposed Action have been analyzed in the Bootstrap Project Draft Environmental Impact Statement (BLM 1996a).

Impacts to mule deer were assessed in the Dee Gold Cumulative Effects Analysis for Mule Deer and Pronghorn Antelope (BLM 1992) and in the Bootstrap Project Draft Environmental Impact Statement (BLM 1996a). The area of analysis for mule deer was NDOW's Management Area 6 which includes nearly 1.5 million acres of public and private lands that extend from Crescent Valley to the Duck Valley Indian Reservation. Cumulative impacts have resulted from the existing and proposed mining and exploration operations, livestock grazing, and wildfires. Cumulative impacts to mule deer include the loss of habitat (cover and forage) and displacement.

Most exploration and mining activities within the Carlin Trend occur within mule deer transition range which is used during fall and spring migration between winter and summer range. The transition range may also be used as winter range during winters with little snow accumulation or years in which the snow accumulation occurs in late winter. Transition range includes approximately 287,000 acres (19 percent) of Management Area 6. Cumulative surface disturbance within the Carlin Trend is approximately 25,370 acres (9 percent of the transition range) (BLM 1996a and BLM 1996b). The Proposed Action would add an additional 30 acres of disturbance (0.01 percent of the transition range) to mule deer transition range within the Carlin Trend. This would represent approximately 0.1 percent of the total existing or proposed disturbance to mule deer transition range within the Carlin Trend.





## 4.5 MONITORING

A BLM representative would make regular field inspections of the REN Exploration Project area. These inspections would be performed throughout construction, operation, and reclamation of the proposed action. All field compliance inspections would be documented in the project file at the BLM office in Elko, Nevada.

If the drilling schedule necessitates drilling in Section 36, T37N, R49E during the spring, a survey of the sage grouse strutting ground would be conducted prior to any drilling or access route construction.

Uranerz would be required to submit an Exploration Program Summary Report by April 15 of each year to the BLM. This Exploration Program Summary Report would describe, including a map illustrating disturbance, all exploration activities that occurred for the year, including all disturbance constructed and reclaimed. The scope of the planned activities for the upcoming year would be outlined as part of the Summary Report. If the proposed activities go beyond the limits defined in the Plan of Operations, then an amendment to the plan would be filed.





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## 5.0 CONSULTATION AND COORDINATION

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### 5.1 LIST OF PREPARERS

#### **U.S. Bureau of Land Management - Elko Field Office**

Janice Stadelman	Project Lead, Plan Review, Geology, Minerals, Paleontological Resources
Evelyn Treiman	NEPA Coordination, Visual Resources
Eric Dillingham	Cultural Resources, Native American Religious Concerns
Ken Nelson	Lands
Nick Rieger	Hazardous Materials
Roy Price/Ken Wilkinson	Wildlife, Threatened, Endangered and Nevada State Sensitive Species
Carol Marchio	Soils, Air, Water
Denise Adkins	Livestock Grazing

#### **JBR Environmental Consultants, Inc.**

Kent McAdoo	Nevada Operations Leader, Sr. Ecologist
Gary Back	Ecologist
Greg Brown	Environmental Analyst/Biologist

### 5.2 PERSONS, GROUPS, OR AGENCIES CONSULTED

#### **Uranerz U.S.A., Inc.**

William G. Houston	Manager, Land and Contracts
Kelly Cluer	Geologist

#### **Nevada Division of Wildlife**

Rory Lamp	Mining Biologist
Pete Bradley	Biologist

#### **Nevada Natural Heritage Program**

Kim Goodwin	
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## **U.S. Fish and Wildlife Service**

Carlos Mendoza

### **Native American Consultation**

Felix Ike	Chairperson, Te-Moak Tribe of Western Shoshone
Raymond Gonzales	Chairperson, Elko Band Council
Gelford Jim	Chairperson, Battle Mountain Band Council
Andrea Woods	Chairperson, Wells Band Council
Vince Garcia	Chairperson, Southfork Band Council
James Paiva	Chairperson, Duck Valley Tribal Council
Larry Kibby	Director, Western Shoshone Historic Preservation Society

### **5.3 PUBLIC NOTICE AND AVAILABILITY**

As part of the preparation of the REN Exploration Project Environmental Assessment, the BLM Elko Field Office solicited public comments by letter on the project from numerous agencies, organizations, and private individuals from March 28, 1997 through April 30, 1997. The BLM Elko Field Office issued a news release on March 28, 1997 to 19 news organizations. The status and availability of this project is in the July 1997 version of the NEPA Calendar. The following lists the responders and their respective concerns.

Nevada Division of Wildlife	Mule deer and pronghorn antelope migration; sage grouse strutting ground; raptors (especially those nesting in old REN pit); reclamation; bats.
Nevada Department of Transportation	Additional traffic and access control of SR-766.
RayRock Mines, Inc.	Concern for drilling in the old REN heap leach facility and the integrity of the heap leach pad liners (telephone call from Jerry Hepworth to Janice Stadelman).
U.S. Fish and Wildlife Service	Threatened, endangered, and candidate species; species of concern.

Copies of the REN Exploration Project Environmental Assessment can be obtained at the BLM Elko Field Office, 3900 East Idaho Street, Elko, Nevada.





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## 6.0 REFERENCES

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Denver Federal Center  
Bldg. 50, OC-521  
P.O. Box 25047  
Denver, CO 80225

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